

Appendix B  
Road Maintenance Specifications

811 SURFACE MAINTENANCE

813 SPOT SURFACING

832 LOAD, HAUL, AND PLACE MATERIALS

834 ROADWAY DRAINAGE SYSTEM MAINTENANCE

842 Roadway Vegetation Control, mowing

## 811 SURFACE MAINTENANCE

### 811.01

#### Service Required

Smooth and shape native or aggregate surfaced roads including traveled way, shoulders, turnouts, and intersections. Reshape or recondition ditches, water bars, and drain dips.

### 811.02

#### Performance Standards

##### **A. Maintenance Level 4 and 5 Roads**

A road surface is maintained to standard when the travel way is free of washboards, potholes, or other irregularities. The surface is smooth, compact, crowned or sloped to drain, without segregation of the surfacing materials. Suitable materials have been recovered and incorporated. Unsuitable materials have been removed. Ditches and road surface drainage structures function efficiently. Unpaved shoulders are shaped to provide a smooth transition from the paved surface and drain efficiently.

##### **B. Maintenance Level 3 Roads**

A road surface is maintained to standard when the surface is compact, crowned, or sloped to drain, without segregation of the surfacing materials. The road surface has no ruts or rills, suitable materials have been recovered and incorporated. Unsuitable materials have been removed. Ditches and road surface drainage structures function efficiently.

##### **C. Maintenance Level 2 Roads**

A road surface is maintained to standard when the surface is shaped to drain, and where ditches and road surface drainage structures function efficiently. The road surface has no continuous ruts or rills, and no large concentrations of unsuitable materials remain.

##### **D. All Roads**

When ordered by the Contracting Officer to work in a weed infested area the contractor will be required to prevent spreading the infestation into un-infested areas by cleaning vehicles and equipment. The contractor will use wash stations approved by the Contracting Officer.

### 811.03

#### Location of Work

As specified on roads listed on the task order road listing, shown on the plans, marked on the ground, or as ordered by the Contracting Officer. Locations of weed infested areas are marked on the ground. Do not operate in the weed infested areas unless ordered to do so by the Contracting Officer.

### 811.04

#### Measurement

Measurement under this Section will be made by the total number of units for each item listed in the SCHEDULE OF ITEMS completed and accepted.

A. Single Lane Roads: Surface maintenance will be measured along the centerline of the roadway. Turnouts are incidental. Measurement will be to the nearest one-tenth (0.1) mile.

B. Double Lane Roads: Surface maintenance will be measured along the centerline of the roadway. Measurement will be to the nearest one-tenth (0.1) mile.

C. Road Mile: Work activity will be measured along the centerline of the road regardless of the number of lanes.

811.6 Surface  
Maintenance Acceptable  
Quality Levels

Description	Major Defect	Minor Defect	Allowable Defects		Required Action	
			Major	Minor	Major	Minor
Surface Irregularities (Level 4&5)	Potholes greater than 2" deep and wider than 1 foot	Potholes 2" or less deep and 1 foot or less wide	2 per 200 ft	5 per 200 ft	Rework if greater than 2 major defects *	Rework if greater than 5 minor defects *
	Washboards greater than 1" deep	Washboards 1" or less deep and not exceeding 20 feet long	5 per 200 ft	3 per 200 ft	Rework if greater than 5 major defects *	Rework if greater than 3 minor defects *
Surface Irregularities (Level 3)	Potholes greater than 2" deep and wider than 1 foot	Potholes 2" or less deep and 1 foot or less wide	5 per 500	5 per 500 feet	Rework if greater than 4 major defects *	Rework if greater than 4 minor defects *
	Washboards greater than 1" deep	Washboards less than 1" deep and not exceeding 20 feet long	5 per 500 feet	5 per 500 feet	Rework if greater than 4 major defects *	Rework if greater than 4 minor defects *
Road Cross Section (Level 4&5)	Crown or Cross Slope is not uniform and does not drain as specified on more than 250' of surface per mile	Crown or Cross Slope is not uniform and does not drain as specified on less than 250' of surface per mile	0	2 per miles	Rework	Rework if greater than 2 minor defects *
Road Cross Section (Level 3)	Crown or Cross Slope is not uniform and does not drain as specified on more than 250' of surface per mile	Crown or Cross Slope is not uniform and does not drain as specified on less than 250' of surface per mile	0	3 per mile	Rework	Rework if greater than 3 minor defects *
Road Cross Section (Level 2)	Road surface does not drain properly and causes erosion, or obstructs high clearance vehicles	Road surface does not drain properly, but does not cause erosion	0	5 per mile	Rework	Rework if greater than 5 minor defects
Oversized Material (Level 3&4 aggregate surfaced roads)	Material greater than 3" diameter remaining on the road surface	Material less than 3" diameter remaining on the road surface and traffic safety is not compromised	0	3 mile	Rework	Rework if greater than 3 minor defects

<b>Oversized Material (Level 2)</b>	<b>Objects in traveled way that obstruct high clearance vehicles</b>	<b>Debris in traveled way that may impede high clearance vehicles</b>	<b>0</b>	<b>1 per mile</b>	<b>Rework</b>	<b>Rework if greater than 1 minor defects</b>
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Description	Major Defect	Minor Defect	Allowable Defects		Required Action	
			Major	Minor	Major	Minor
Aggregate Surface Quality	Gradation of surface aggregate is degraded by more than 10 %	Gradation of surface aggregate is degraded by less than 10 %	0	1 per miles	Rework	Rework if greater than 1 minor defects
	A loss of more than 10 CY/mile	A loss of less than 10 CY/mile	0	1 per mile	Replace or recover lost material	Accept the loss of material
	surfacing is segregated over more than a 100 square yard area per 1000 linear feet of road and traffic safety is compromised	surfacing is segregated over less than a 100 square yard area per 1000 linear feet of road and traffic safety is not compromised	0	N/A	Rework	Accept the loss of surface quality
Backslopes	Undercut backslope will result in destabilization of slope	Undercut backslope will not result in destabilization of slope	0	100 ‘ per mile	Repair and Stabilize	Revegetate if greater than 5 minor defects *
Compaction	Visible displacement occurs under hauling or spreading equipment	N/A	0	N/A	Rework	N/A
Ditches and Road Drainage Structures	Impeded flow or water diverted out of drainage structures	< 20% impeded, but water will stay in the channel	0	0	Rework	Rework
Unpaved Shoulders (Level 3, 4, & 5)	Elevation difference between pavement and shoulder is greater than 1"	Elevation difference between pavement and shoulder is less than 1"	0	100’ per 1000’	Rework	Rework if greater than 1 minor defects *
	Material greater than 1/4" diameter remaining on the road surface	Material 1/4" diameter or less remaining on the road surface and traffic safety is not compromised	0	100’ per 1000’	Rework if greater than 0 major defects *	Rework if greater than 0 minor defects *
	Does not drain away from pavement	Does not drain away from pavement	0	0	Rework	Rework
Working outside of project limits	Area contains invasive weeds	N/A	0	N/A	Repair and treat affected areas as directed by the Contracting Officer	N/A

## 813 SPOT SURFACING

### 813.01

#### Service Required

Load, haul, and place surface material to repair or stabilize road surfaces.

### 813.02

#### Performance Standard

A. Spot surfacing is complete when the designated quantity of the ordered material has been placed.

B. All materials transported onto National Forest System land will be weed-free. Written documentation of methods used to determine the weed-free status of any and all materials furnished by the contractor will be furnished to the Contracting Officer before transport of any materials onto National Forest System land.

### 813.03

#### Location of Work

As specified on roads listed on the TASK ORDER ROAD LISTING, SHOWN ON THE PLANS, or as ordered by the Contracting Officer.

### 813.04

#### Measurement

Measurement under this Section will be made by the total number of units for each item listed in the SCHEDULE OF ITEMS completed and accepted.

A. The quantity will be the number of cubic yards measured in the vehicles, or square yards of aggregate placed.

| B. Material measured by the ton shall be verified by certified weight tickets.

813.4 Spot Surfacing  
Acceptable Quality Levels

Description	Major Defect	Minor Defect	Allowable Defects		n	
			Major	Minor	Major	Minor
Depth of Aggregate	Dimension of spot surfacing deviates by more than 1" from depth specified. Or less than 1" from dimension specified but is consistently high or low.	Dimension of spot surfacing deviates by 1" or less than from depth specified and not consistently high or low.	0	N/A	If depth is low, correct placement of aggregate to specified dimensions. If depth is high only pay for ordered amount	Accept aggregate as placed, pay only for delivered quantities.
Width of Aggregate	Dimension of spot surfacing is less than specified width or more than 1' wider than specified.	Dimension of spot surfacing is up to 1' wider than specified but not consistently wide.	0	N/A	If width is narrow, correct placement of aggregate to specified dimensions. If width is too wide reshape.	Accept aggregate as placed, pay only for delivered quantities.
Length	Dimension of spot surfacing is shorter than specified length or more than 100' longer than specified.	Dimension of spot surfacing is shorter than specified length or up to 100' longer than specified.	0	N/A	If length is shorter than specified, correct placement of aggregate to specified dimensions. If too long pay only for ordered amount.	Accept aggregate as placed, pay only for delivered quantities.
Compaction	Visible displacement occurs under heavy spreading equipment	N/A	0	N/A	Rework	N/A
Aggregate Quality	Does not meet specified gradation or durability requirements and is not suitable for intended use	Does not meet specified gradation or durability requirements and is suitable for intended use	0	N/A	Reject and replace	Accept but may reduce payment.
	Material source does not meet weed free requirement	N/A	0	N/A	Reject source	N/A
Finish Quality	Spot surfacing doesn't conform to the adjacent road segments and traffic is impeded.	Spot surfacing generally conforms to the adjacent road segments, but traffic may be slowed.	0	5 per miles	Reshape or recompact surfacing as needed.	Accept but may reduce payment.

## 832 LOAD, HAUL, AND PLACE MATERIALS

### 832.01

#### Service Required

Load, haul, and place material at designated sites.

### 832.02

#### Performance Standard

Loading, hauling, and placing is complete when no obstruction remains in or adjacent to the roadway or in ditches which would have the potential to interfere with traffic use, block or divert water from structures or channels. This includes relocation, repositioning, stabilization, and revegetation as ordered by the Contracting Officer.

### 832.03

#### Location of Work

As specified on roads listed on the TASK ORDER ROAD LISTING, SHOWN ON THE PLANS, or as ordered by the Contracting Officer.

### 832.04

#### Measurement

Measurement under this Section will be made by the total number of units for each item listed in the SCHEDULE OF ITEMS completed and accepted.

- A. Cubic Yard: The quantity will be the number of cubic yards measured in the vehicles.
- B. Mile: Work activity will be measured along the centerline of the road regardless of the number of lanes.





832.6 Load, Haul, and Place Material

Acceptable Quality Levels

Description	Major Defect	Minor Defect	Allowable Defects		Action	
			Major	Minor	Major	Minor
Slopes	Unstable material left on slopes	Material left on slopes that can be stabilized and won't block drainages	0	0	Remove	Remove or stabilize in place
Backslopes	Undercut backslope will result in destabilization of slope	Undercut backslope will not result in destabilization of slope	0	0	Repair and Stabilize	Revegetate if greater than X minor defects *
Ditches, inlet/outlet channels, streams and catch basins	water will be diverted out of the drainage structure or soil enters system	< 20% impeded, but water will stay in the channel.	0	0	Rework	Rework if greater than X minor defects *
Debris on Road (ML 4-5)	Any debris in traveled way	Debris in traveled way that may slow or impede traffic.	0	0	Rework	Rework if greater than 1 minor defects *
Debris on Road (ML 3)	Debris in traveled way that may impede traffic.	Debris in traveled way that may slow traffic.	0	0	Rework	Rework if greater than 1 minor defects *
Debris on Road (ML 2)	Objects in traveled way that obstruct high clearance vehicles	Debris in traveled way that may impede high clearance vehicles	0	0	Rework	Rework if greater than 0 minor defects *
Placed Material (Disposal Sites)	Unstable material on designated sites.	N/A	0	N/A	Stabilize	N/A
Revegetation	No revegetation work done	Revegetation work incomplete	0	0	Rework	Rework
Work Area Management	Not following approved safety plan which may include signs, flaggers, and other temporary traffic control measures	Not following approved safety plan which may include signs, flaggers, and other temporary traffic control measures	0	0	Suspend work until in compliance	Suspend work until in compliance

### 833 DRAINAGE STRUCTURE INSTALLATION OR REMOVAL

#### 833.01

##### Service Required

Install or remove drainage structures including culverts, water-bars, drivable drain dips, and cross ditches.

#### 833.02

##### Performance Standard

Drainage structure installation is complete when culverts, water-bars, drivable drain dips and cross ditches have been installed to the lines and grades specified, and drainage structure removal is complete when designated culverts, water-bars and cross ditches have been removed and culverts have been properly disposed of.

#### 833.03

##### Location of Work

As specified on roads listed on the TASK ORDER ROAD LISTING, SHOWN ON THE PLANS, or as ordered by the Contracting Officer.

#### 833.04

##### Measurement

Measurement under this Section will be made by the total number of units for each item listed in the SCHEDULE OF ITEMS completed and accepted.

A. Mile: Work activity will be measured along the centerline of the road regardless of the number of lanes.

B. Linear Foot: Work activities by the linear foot will be measured using standard survey methods rounded to the nearest one (1) foot. Culvert bands are incidental to the installation.

833.6 Drainage Structure Installation or Removal  
Acceptable Quality Levels

Description	Major Defect	Minor Defect	Allowable Defects		Required Action	
			Major	Minor	Major	Minor
Culvert size	Culvert is smaller than the designated diameter shown on the drawings.	Culvert is larger than the designated diameter shown on the drawings.	0	N/A	Remove culvert and replace with designated size	Accept if culvert fits the geometry of the road but pay at designated size otherwise replace
	Culvert is shorter than the designated length shown on the drawings.	Culvert is longer than the designated length shown on the drawings.	0	0	Replace or add section to fit geometry of road.	Remove excess culvert and treat cut end, or harden fill slope to prevent erosion and pay for ordered length
Grade and alignment of culvert	More than 10% deviation from original lines and grades.	10% or less deviation from original lines and grades.	0	0	Remove and replace culvert	Remove and replace culvert
Sag or depression in road after placement of culvert and backfill material	Greater than 2 inch depression in traveled way	2 inch or less depression in traveled way	0	N/A	Furnish, place and compact designated material to repair depression.	N/A
Removed culvert or pieces left on National Forest System Lands	Culverts or pieces of culvert left on National Forest System Lands	N/A	0	N/A	Remove from National Forest System Lands	N/A
Water-bars and cross ditches	More than 10% deviation from original lines and grades.	10% or less deviation from original lines and grades.	0	0	Rework	Rework
Drivable grade dip	More than 10% deviation from specified lines and grades	10% or less deviation from specified lines and grades	0	0	Rework	Rework
Sedimentation	Operations cause or allow sediment to leave site.	N/A	0	N/A	Cease operations until sediment is controlled	N/A
Work Area Management	Not following approved safety plan which may include signs, flaggers, and other temporary traffic control measures	Not following approved safety plan which may include signs, flaggers, and other temporary traffic control measures	0	0	Suspend work until in compliance	Suspend work until in compliance

## 834 ROADWAY DRAINAGE SYSTEM MAINTENANCE

### 834.01

#### Service Required

Clean and recondition roadway drainage systems including culverts, ditches, inlet and outlet channels, catch basins, and appurtenances.

### 834.02

#### Performance Standard

Drainage system maintenance is complete when no obstruction remains in the defined area adjacent to the structure or in ditches which would have the potential to block water from entering the structure, back water into the structure (except for structures designed to function in a back-flooded manner), or divert water outside the defined channel. Equipment operation in live streams or hydraulic flushing of drainage structures is not permitted.

When ordered by the Contracting Officer to work in a weed infested area the contractor will be required to prevent spreading the infestation into un-infested areas by cleaning vehicles and equipment. The contractor will use wash stations approved by the Contracting Officer.

### 834.03

#### Location of Work

As specified on roads listed on the task order road listing, shown on the plans, marked on the ground and/or ordered by the Contracting Officer and;

1. Drainage structures including inlet structures, culverts, catch basins, inlet/outlet channels, and ditches within the area shown on the plans or in the supplemental specifications.
2. Culverts - a minimum external horizontal distance of 10 feet in any direction from the inlet and outlet end and a minimum internal distance of 3 feet from the inlet and outlet ends.
3. Ditches adjacent to the roadbed.
4. This work does not include bridges, cattleguards, drain dips, or water bars.
5. Do not operate in the weed infested areas marked on the ground unless ordered to do so by the Contracting Officer.

### 834.04

#### Measurement

Measurement under this Section will be made by the total number of units for each item listed in the SCHEDULE OF ITEMS completed and accepted.

Mile: Work activity will be measured along the centerline of the road regardless of the number of lanes.

834.6 Drainage Structure Maintenance

Acceptable Quality Levels

Description	Major Defect	Minor Defect	Allowable Defects		Action	
			Major	Minor	Major	Minor
Blocked Culverts	Greater than 20 % of end area blocked	20% or less of end area blocked	0	0	Rework	Rework
Damaged Culvert Inlet/outlets	Greater than 20 % of end area blocked	20% or less of end area blocked	0	0	Rework	Rework
Impeded flow for ditches, inlet/outlet channels, and catch basins	water will be diverted out of the drainage structure or system	< 20% impeded, but water will stay in the channel.	0	5' per 1000 ft	Rework	Rework if greater than 1 min <sup>or</sup> defects *
Debris on Road (ML 4-5) produced by Service Provider operations.	Any debris in traveled way	N/A	0	N/A	Rework	N/A
Debris on Road (ML 3) produced by Service Provider operations.	Debris in traveled way that may impede traffic.	Debris in traveled way that may slow traffic.	0	0	Rework	Rework
Debris on Road (ML 2) produced by Service Provider operations.	Objects in traveled way that obstruct high clearance vehicles	Debris in traveled way that may impede high clearance vehicles	0	0	Rework	Rework
Aggregate Surface Quality	Gradation of surface aggregate is degraded by more than 10 %	Gradation of surface aggregate is degraded by 10 % or less	0	100' per 1000	Rework	Rework if greater than 1 min <sup>or</sup> defects *
Backslopes	Undercut backslope will result in destabilization of slope	Undercut backslope will not result in destabilization of slope	0	10' per 100'	Repair and Stabilize	Revegetate if greater than 1 minor defects *
Vegetation	woody vegetation within 5 feet of the inlet end of drainage structures or in ditches that interferes with flow	low growing vegetation within 5 feet or more of inlet end of drainage structures or in ditches that does not interfere with flow	0	N/A	Remove	Leave in place
Work Area Management	Not following approved safety plan which may include signs, flaggers, and other temporary traffic control measures	Not following approved safety plan which may include signs, flaggers, and other temporary traffic control measures	0	0	Suspend work until in compliance	Suspend work until in compliance
Working outside project limits	Area contains invasive weeds	N/A	0	N/A	Repair and treat affected areas as directed by the Contracting Officer	N/A

Performance Work Statement  
842 ROADWAY VEGETATION MAINTENANCE

842.01

**Service Required**

Remove vegetation, including trees, on roadway surfaces and roadsides.

842.02

**Performance Standard**

Roadway vegetation maintenance is complete when the vegetation has been removed from the designated treatment area which interferes with traffic, obscures signs, impedes the flow of water or diverts water from drainage structures.

***A. Maintenance Level 3 roads***

Vegetation shall be removed to a maximum height of 6 inches above ground surfaces. Trees larger than 6 inches dbh are designated to remain.

***B. Maintenance Level 2 roads***

Vegetation shall be removed to a maximum height of 12 inches above ground surfaces. Trees larger than 10 inches dbh are designated to remain.

**C. All Roads**

When ordered by the Contracting Officer to work in a weed infested area the contractor will be required to prevent spreading the infestation into un-infested areas by cleaning vehicles and equipment. The contractor will use wash stations approved by the Contracting Officer.

842.03

**Location of Work**

As specified on roads listed on the road listing, shown on the plans, marked on the ground or ordered by the Contracting Officer.

***A. Maintenance Level 3 roads***

The treatment area will be SHOWN ON THE PLANS. If plans or supplemental specifications are not included, the treated area includes the road bed measured from center line to bottom of ditch, or defined road edge, plus an additional 5 feet on each side. If there is no defined road edge, or a ditch does not exist, the treated area is 13 feet from both sides of center line of the road. Provide a vertical clearance of 8 feet measured from the road surface elevation.

***B. Maintenance Level 2 roads***

The treatment area will be SHOWN ON THE PLANS. If plans or supplemental specifications are not included, the treated area includes the road bed measured from center line to bottom of ditch, or defined road edge, plus an additional 3 feet on each side. If there is no defined road edge, or a ditch does not exist, the treated area is 11 feet from both sides of center line of the road. Provide a vertical clearance of 5 feet measured from the road surface elevation.

**C. All roads**

Locations of weed infested areas are marked on the ground. Do not operate in the weed infested areas unless ordered to do so by the Contracting Officer.

842.04

**Measurement**

Measurement under this Section will be made by the total number of units for each item listed in the SCHEDULE OF ITEMS completed and accepted.

**A. Mile**

Work activity will be measured along the centerline of the road regardless of the number of lanes.



## Acceptable Quality Levels

Description	Major Defect	Minor Defect	Allowable Defects		Required Action	
			Major	Minor	Major	Minor
Tree damage	Damage to more than 30% of the tree bole	Damage to 30% or less of the tree bole	2 per unit	4 per unit	Remove or Treat	Treat
Horizontal Clearance	More than 20% not cleared to limits	20% or less not cleared to limits	0	1 per unit	Rework	Rework if greater than X minor defects *
Vertical Clearance	More than 20% not cleared to limits	20% or less not cleared to limits	0	1 per unit	Rework	Rework if greater than X minor defects *
Height above ground surface	More than 20% not cleared to limits	20% or less not cleared to limits	0	1 per unit	Rework	Rework if greater than X minor defects *
Drainage	Impeded flow or water diverted out of drainage structures.	20% or less impeded, but water will stay in the channel.	0	1 per unit	Rework	Rework if greater than 4 minor defects *
Oversized Material (Level 4&5)	Material greater than 3" diameter remaining on the road surface	Material 1" – 3" in diameter remaining on the road surface	2	4	Rework	Rework

Description	Major Defect	Minor Defect	Allowable Defects		Required Action	
			Major	Minor	Major	Minor
	Material greater than 3" diameter and 36" in length remaining on the roadway drainages or has the potential to move into drainages.	Material 1" - 3" in diameter and greater 36" in length remaining on the roadway slopes and drainages or has the potential to move into drainages.	2 per unit	4 per unit	Rework if greater than 2 minor defects *	Rework if greater than 4 minor defects *
Oversized Material (Level 3)	Material greater than 3" diameter and 12" in length remaining on the road surface	Material 1" - 3" in diameter and 36" in length remaining on the road surface	0	2 per unit	Rework	Rework if greater than 2 minor defects *
	Material greater than 3" diameter and 36" in length remaining on the roadway drainages or has the potential to move into drainages.	Material 1" - 3" in diameter and greater 36" in length remaining on the roadway slopes and drainages or has the potential to move into drainages.	4 per unit	2 per unit	Rework if greater than 4 minor defects *	Rework if greater than 2 minor defects *
Oversized Material (Level 2)	Concentrations of material greater than 6" diameter and 3 feet in length remaining on the	Material less than 6" diameter and 3 feet in length remaining on the road surface	0	2 per unit	Rework	Rework if greater than 4 minor defects *

Description	Major Defect	Minor Defect	Allowable Defects		Required Action	
			Major	Minor	Major	Minor
	road surface					
	Unstable concentrations of material less than 6" diameter and 3 feet in length remaining on the roadway slopes.	N/A	0	2 per unit	Rework	N/A
	Material greater than 3" diameter and 36" in length remaining on the roadway drainages or has the potential to move into drainages.	Material 1" - 3" in diameter and greater 36" in length remaining on the roadway slopes and drainages or has the potential to move into drainages. .	0	2 per unit	Rework	Rework if greater than 2 minor defects *
Concentrations (Level 3-5)	Any concentrations that affect sight distance	N/A	0	0	Rework	N/A

Description	Major Defect	Minor Defect	Allowable Defects		Required Action	
			Major	Minor	Major	Minor
Work Area Management	Not following approved safety plan which may include signs, flaggers, and other temporary traffic control measures	Not following approved safety plan which may include signs, flaggers, and other temporary traffic control measures	0	0	Suspend work until in compliance	Suspend work until in compliance
Working outside of project limits	Area contains invasive weeds	N/A	0	N/A	Repair and treat affected areas as directed by the Contracting Officer	N/A

